

Notice of Allowability

Application No.

10/020,895

Applicant(s)

RIIS ET AL.

Examiner

Art Unit

Eunice Ng

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed May 21, 2007.
2. ☒ The allowed claim(s) is/are 13-16, 18-25 and 27-41.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed 2/21/07, Applicants have submitted an Amendment, filed 5/21/07, adding new claim 41, without adding new matter, and arguing to traverse claim rejections.

Response to Arguments

2. Applicant's arguments, see Remarks, pp. 7-11, filed 5/21/07, with respect to claims 13-16, 18-25 and 27-40, have been fully considered and are persuasive after further search and consideration. Thus, the rejection of claims 13-16, 18-25 and 27-40 has been withdrawn.

Allowable Subject Matter

3. Claims 13-16, 18-25 and 27-41 are allowable. The following is an Examiner's Statement of Reasons for Allowance:

Russell et al. teaches a speech recognition system in which an utterance to be recognized is represented as a sequence of phonetic segment models (see abstract, discussing "phone-level" speaking and estimation) in which a transition probability represents the probability of the occurrence of a transition between the models (see lines 4-5, "N-state HMM... transition probability" under "ROS compensation"), comprising means (a speech recognizer) for: estimating the number of phonetic segments in the utterance to be recognized (see lines 1-2 under "Phone-level measures of ROS" describing a measure of "phones-per-second" (phonetic

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segments) in a sentence); and biasing the transition probabilities in dependence on the rate of speech of the utterance (see lines 9-10 under “ROS compensation,” which discuss the state transition probabilities “scaled for fast speech”).

Since Russell et al. estimates the number of phones-per-second, it inherently teaches estimating the number of phonetic segments in the utterance. However, even though Russell et al. must inherently determine a number of phones in an utterance in order to determine the rate of speech in phones-per-second, this does not necessarily imply that any function performed on the basis of the rate of speech is performed also and inherently based on phones in the utterance, as discussed by Applicant’s Remarks on page 7, last paragraph through page 8. As illustrated by the Applicant, very different outcomes may result between biasing transition probabilities based on rate of speech versus the number of phonetic segments in a word or utterance.

Gandhi et al. at col. 7, ll. 25-33, teaches segmenting test utterances into words and computing a duration normalized likelihood score for each word in the input string. However, Gandhi et al. is directed to speaker verification and describes computing a likelihood score for each word in a sentence. In other words, Gandhi et al. discloses the computation of a score based on a particular model. To the contrary, the claimed invention biases transition probabilities which indicate whether to change models instead of calculating a score for any particular model, as indicated by Applicant’s Remarks on page 9, first paragraph.

Therefore, Russell et al., the closest prior art found, taken alone or in combination with Gandhi et al., fails to teach nor fairly suggest, biasing the transition probabilities in dependence on the estimated number of phonetic segments in the word, as recited in independent claims 13, 27, 29, 39 and 41.

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Claims 14-16, 18-25, 33 and 34 further limit claim 13, above, and thus contain allowable subject matter. Claims 28, 35 and 36 further limit claim 27, above, and thus contain allowable subject matter. Claims 30-32, 37 and 38 further limit claim 29, above, and thus contain allowable subject matter. Claim 40 further limits claim 39, above, and thus contain allowable subject matter.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunice Ng whose telephone number is 571-272-2854. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EN
8/2/07


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